

11-f

CR

Temperature regulation of respiration in *Botrytis cinerea*.
V. E. Sokolova and R. V. Artsikhovskaya. *Doklady
Akad. Nauk S.S.S.R.* 84, 177-80(1982).—Specimens kept
at 25° show less increase in the rate of respiration in exptl.
runs in which temp. is varied from 0° to 30° than is shown
by cultures grown at 3°. Thus the temp. acts as a stimulus
or irritant rather than as an assimilation factor. The ir-
ritant effect is greater with younger cultures than with older
ones. The differences of temp. adaptations in higher plants
are discussed. G. M. Kosolapoff

CA

12

Formation of ethyl alcohol and acetaldehyde in apple tissues. E. V. Artsikhovskaya and V. E. Sokolova (A. N. Bakh Biochem. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 84, 705-8 (1952).—The content of EtOH suffers a slight min. at the max. rate of growth of the fruit. In storage at 0° EtOH rises by 110% from August to January, in the meat of the apple and by 207% in the skin. AcH concn. rises with ripening, the level remaining well below that of EtOH. At full ripeness the AcH level rises sharply and in storage in midwinter the increases may reach 750-800%. By January the AcH content begins to decline in the meat, but remains nearly const. in the skin. The lowered O content of the surroundings almost has no effect on the concn. of EtOH, indicating anaerobic nature of its formation. AcH concn. rises as the O concn. in the air is decreased, however; the effect shows up in the skin most readily, and least readily in the meat. The formation of the anaerobic products is enhanced by raised temp. (range of 10-30° studied). The temp. coeff. for EtOH formation is nearly 1; that of AcH ranges from 1.2 to 1.8.
G. M. Kosolapoff

RUBIN, B. A., ARTSIKHOVSKIY, YE. V., SOBOLEVA, V. YE., IVANOVA, T. M.

Apple

Role of stearate oxidases in the respiration of apples. Dokl. AN SSSR 85, no. 5, 1952.

2

9. Monthly List of Russian Accessions, Library of Congress, December 1954. Unclassified.

1. RUBIN, B. A.; SOKOLOVA, V. Ye.; ARTSIKHOVSKAYA, Ye. V.
2. USSR (600)
4. Apple
7. Adjustment of the respiration of apples to temperature, Dokl. AN SSSR, 86, No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

RUBIN, B.A., professor; OPARIN, A.I., akademik, redaktor; SOKOLOVA, V.Ye.,
redaktor; GUBER, A., tekhnicheskiiy redaktor.

[Plant physiology] Fiziologiya rastenii. Pt. 1. Pod red. A.I.Oparina.
Moskva, Gos. izd-vo "Sovetskaya nauka." 1954. 355 p. (MLA 7:11)
(Botany--Physiology)

RUBIN, B.A.; SOKOLOVA, V.Ye.

Characteristic respiratory reaction of winter and spring wheat to temperature. Izv.AN SSSR Ser.biol. no.1:20-31 Ja-F '54. (MLRA 7:1)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR.
(Wheat) (Plants--Respiration)

SOKOLOVA, V.Ye.

The place of terminal synthesis of sucrose in sugar beets. Bio-
khimiia 19 no.1:116-125 Ja-F '54. (MLRA 7:3)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(Sugar beets) (Sucrose)

SOKOLOVA, V. E.

✓ Some peculiarities of metabolism of potato attacked by wrinkled mosaic. B. A. Rubin, V. E. Sokolova, and O. N. Savel'eva. *Doklady Akad. Nauk S.S.S.R.* 169, 1180-2 (1956).—Wrinkled mosaic infection in potato plants results in decreasing effectiveness of photosynthesis particularly in the 2nd half of the growth period, with more intense respiration occurring at the same time at 10-20°, whereas at 30-40° the increase of respiration is much more pronounced in the 2nd half of growth period. Starch synthesis declines with increase of respiration. G. M. Kozlovskii.

3

SOKOLOVA, V.E

✓ Peculiarities of oxidative systems of winter and summer wheat. Y. E. Sokolova and O. N. Savel'eva (A. N. Bakh Biochem. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 111, 185-8(1958).—In winter wheat the fraction of activity of residual respiratory enzymes is smaller than that in summer wheat; this is well shown at 10°. Ascorbinoxidase in winter wheat shows a drop of activity on elevation of temp. from 10° to 40°; in summer wheat this effect is even more pronounced. Polyphenoloxidase behaves similarly. Peroxidase activity rises in both wheats over the 10-40° temp. interval. Cytochrome oxidase is absent. G. M. K. *filed*

2

AUTHORS: Sokolova, V, Ye., Savel'yeva, O. N. SOV/20-120-5-43/67

TITLE: Some Characteristic Features of Plant Dehydrases (Nekotoryye osobennosti rastitel'nykh degidraz)

PERIODICAL: Doklady Akademii nauk SSSR, Vol. 120, Nr 5, pp. 1084 - 1087 (USSR) 1958

ABSTRACT: By work conducted in the laboratory of the authors it was proved (Refs 1,2) that the terminal oxydases which cause the final stage of the plant respiration exhibit a different behaviour against the environmental factors, above all against temperature. Thus the plant is able to maintain a normal course of respiration in the case of varying environmental conditions. It can be assumed that the adaptation of the respiratory gas exchange is to a certain extent determined also by the dependence of the action of individual dehydrases on temperature. The first series of experiments was carried out with bean seeds. The dehydrase activity was determined in the case of thin slices of germinated seeds at 5, 10, 20, 30, 40, and 45° according to their oxygen absorption. Table 1 shows that the most narrow effective range of temperature activity is found in the succin dehydrase (30-40°).

Card 1/3

Some Characteristic Features of Plant Dehydrases

SOV/20-120-5-43/67

The temperature rise up to 45° and its reduction up to 20° completely inactivated this ferment. In contrast to this the isocitric dehydrase which has a temperature optimum at 10 - 20° is able to maintain a high activity even at lower and higher temperatures. The α-glycerophosphate dehydrases and glucose dehydrases as well have a rather wide effective range. However, these two last mentioned ferments react in a quite different way to temperature changes. The results obtained with beans confirmed completely the assumptions concerning the different temperature dependence of the complex of dehydrases. Analogous experiments with apple slices (fruit pulp and peel) at 10, 20, and 30° showed a reaction of the dehydrases to temperature changes which was very similar to that of beans. The glutamic- and lactic dehydrases which were not investigated in the case of beans had also optima shifted in the direction of the increased temperatures. Besides was found (Table 2) that the dehydrases as well as the oxydases react differently to the temperature factor of the milieu. Finally the inhibitors were investigated: iodine acetate, sodium malonate, and sodium selenite. They were tested with a little germinated bean seeds. It was proved that the evidence concerning the inhibitor effect on the animal dehydrases cannot be extended to plant dehydrases without

Card 2/3

. Some Characteristic Features of Plant Dehydrases

SOV/20-120-5-43/67

previous rechecking. For a selective suppression of various dehydrases malonate and selenite are more favorable. Professor B.A. Rubin gave valuable advice for this paper. There are 4 tables and 6 references, 2 of which are Soviet.

ASSOCIATION: Institut biokhimii im. A.N.Bakha Akademii nauk SSSR (Institute of Biochemistry imeni A.N.Bakh, AS USSR)

PRESENTED: February 20, 1958, by A.I.Oparin, Member, Academy of Sciences, USSR

SUBMITTED: February 13, 1958

1. Plants--Physiology 2. Seeds--Physiology 3. Temperature--Physiological effects 4. Herbicides--Test results

Card 3/3

SOV/20-123-2-35/50
17(3)
AUTHORS: Sokolova, V. Ye., Savel'yeva, O. N., Rubin, B. A.
TITLE: The Character of the Transformation of Chlorogenic Acid in
Potato Tubers Affected by Phytophthora Infestans (Kharakter
prevrashcheniy khlorogenovoy kisloty v klubnyakh kartofelya,
porazhennykh Phytophthora infestans)
PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 335-338
(USSR)
ABSTRACT: The role played by the phenol compounds as a resistance factor
of the plants to the phytopathogenic agents becomes more and
more popular. The results of the experiments that tried to find
a correlation between the content of tanning principles and the
resistivity of the plant remained unclear; the reason for this
is the fact that the formation of specific protective substances
from transformed phenols represents a response reaction of the
plant to the invasion of a pathogenic microorganism. Therefore
the finding of such a reaction in a healthy, not affected tis-
sue is almost impossible. As a rule, the protecting tanning
principles are formed more intensely in resistant plant types
and geni (Refs 1,2). Most of the scientists tend to believe

Card 1/4

SOV/20-123-2-35/50

The Character of the Transformation of Chlorogenic Acid in Potato Tubers Affected by Phytophthora Infestans

that the protective effect is mainly realized by oxidative phenol transformations. These oxidized products form a type of chemical barriers that stop the spreading of the infection. Chlorogenic acid and caffeic acid were several times mentioned as such substances. In earlier experiments carried out in the laboratory where the authors work (Ref 5) it was found that the potato type "Moskovskiy", which is resistant to the Phytophthora infestans, has about the double amount of chlorogenic acid as compared to that of the sensitive type "Rannyaya roza". It was also shown that the polyphenol oxydase is highly activated in tubers of the resistant type under the influence of the infection, whereas this ferment remains unchanged in the sensitive type. As chlorogenic acid is the main substrate of the polyphenol oxidase in the potato it must be assumed that the affection of the tubers by the Phytophthora leads to an increased consumption of chlorogenic acid. In this connection it was interesting to find out the actual role played by this acid in the resistance to Phytophthora of the potato, and especially if the fungicide effect originates from this acid

Card 2/4

SOV/20-123-2-35/50

The Character of the Transformation of Chlorogenic Acid in Potato Tubers Affected by *Phytophthora Infestans*

or from its derivatives. Sections of tubers of the mentioned types were infected under optimum conditions with *Phytophthora*. Chromatographic (Fig 1) and spectrophotometric (Table 1) investigations yielded the same results: apparently the invasion of the *Phytophthora* into the tuber of the sensitive type causes a movement of the chlorogenic acid from the healthy parts to the place of infection. The acid accumulates without suppressing the development of the fungi. The content of chlorogenic acid in the necrotic tissue layer of the affected place of the resistant type was 2.5 times lower than that in the healthy parts of the tuber. Apparently, in the resistive types this acid is immediately used for forming several derivatives that have hitherto not been identified. The authors express assumptions as to the nature of these substances and their process of formation; further investigations are necessary to prove they are right. There are 1 figure, 1 table, and 6 references, 2 of which are Soviet.

Card 3/4

SOV/20-123-2-35/50

The Character of the Transformation of Chlorogenic Acid in Potato Tubers Affected by *Phytophthora Infestans*

PRESENTED: July 11, 1958, by A. I. Oparin, Academician

SUBMITTED: July 7, 1958

Card 4/4

БОКОЛОВА, В. YE., САВЕЛЬЕВА, О. N., СОЛОВЬЕВА, Г. A., and
ОЗЕРНИКОВСКАЯ, О. L. (USSR)

"The Biochemistry of the Interaction of the Host Plant and the
Parasite in the Potatoe-Phytophthora infestans System."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961

SGROLOVA, V.Ye.; SHNEL'BERG, O.F.; SOLOV'YAN, G.A.

Toxicity of caffeine and quinic acid in relation to the fungus
Phytophthora infestans. Dokl. AN SSSR 136 no. 3:723-726 Ja '61.
(MIRA 14:2)

1. Institut biokhimi i imeni A.N. Bakha AN SSSR. Predstavleno
akademikom A.I. Oparinym.

(FUNGI, PHYTOPATHOGENIC) (COFFEEINE--TOXICOLOGY)
(QUINIC ACID--TOXICOLOGY)

SOKOLOVA, V.Ye.; SOLOV'YEVA, G.A.

Transformation rate of chlorogenic acid in potato tubers affected
by *Phytophthora infestans*. Dokl. AN SSSR. 144 n6.6:1398-1401
Je '62. (MIRA 15:6)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR. Predstavleno
akad. A.I.Oparinym
(CHLOROGENIC ACID) (POTATO-ROT)

SOKOLOVA, V.Ye.

Conversions of chlorogenic acid and the resistance of potato
tubers to *Phytophthora* infestation. Biokhim.pl.i ovoshch.
no.7:96-114 '62. (MIRA 16:1)

1. Institut biokhimii imeni A.N.Bakha AN SSSR.
(Chlorogenic acid) (Potato rot)

SOKOLOVA, V.Ye.

First International Congress on research work and technology in the
field of food products. Kons. i ov.prom. 18 no.9:12-16 S '63.
(MIRA 16:9)

1. Institut biokhimii imeni A.N.Bakha AN SSSR.
(Food research--Congresses)

SKOLOVA, V. Ye.

Toxicity of chlorogenic acid and its derivatives, caffeic and quinic acids, with respect to the fungus *Phytophthora infestans*.
Izv. AN SSSR Ser. biol. 28 no. 5: 707-718 1963 (MIRA 16:11)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R.,
Moscow.

*

SOKOLOVA, V.Ye.; VASYUKOVA, N.I.

Role of the peripheral layer in the development of necrosis on
potato tubers infected with *Phytophthora infestans*. Dokl. AN
SSSR 160 no.3:724-727 Ja '65. (MIRA 18:3)

1. Institut biokhimii im. A.N. Bakha AN SSSR. Submitted May 22,
1964.

SOKOLOVA, V.Ye.; KAZANSEVA, G.N.; ZVYAGINTSEVA, Yu.V.; METLITSKIY, L.V.

Change in the content of chlorogenic and caffeic acids in stored potato varieties differing as to the resistance to *Phytophthora infestans*. Dokl. AN SSSR 165 no.1:237-240 N '65.

(MIRA 18:10)

1. Institut biokhimii im. A.N.Bakha AN SSSR. Submitted December 31, 1964.

BORUKHSON, Boris Vasil'yevich; SIDOROV, Mikhail Ivanovich;
SEREDOKHIN, V.N., retsenzent; SOKOLOVA, V.Ye., red.

[General technology of flax] Obshchaia tekhnologiya l'na.
2. izd. Moskva, Leg: aia industriia, 1964. 254 p.
(MIRA 17:12)

GUSEV, Vladimir Yegorevich; USENKO, Vladimir Andreyevich;
KISELEV, A.K., prof., kand. tekhn. nauk, retsenzent;
PILIKOVSKIY, M.Ya., kand. tekhn. nauk, retsenzent;
SOKOLOVA, V.Ye., red.

[Spinning of synthetic staple fibers] Priadenie khimicheskogo shtapel'nogo volokna. Moskva, Legkaia industriia, 1964. 593 p. (MIRA 17:11)

SOKOLOVA, V.Yu.

Radioactivity of some plants cultivated in the vicinity of Kiev.
Ukr. bot. zhur. 18 no.3:23-28 '61. (MIRA 14:12)

1. Ukrainskiy nauchno-issledovatel'skiy institut pitaniya.
(Beta rays)
(Plants, Effect of potassium on)

SOKOLOV, G.A.; GOPAK, A.K.; SOKOLOVA, Ya.G.

Process control of masscuite cooking by means of a brasmoscope.
Sakh. prom. 34 no. 12:28-34 D '60. (MIRA 13:12)

1. Smelyanskoye Spetsial'noye konstruktorskoye byuro TSentral'-
nogo nauchno-issledovatel'skogo instituta sakharnoy promyshlennosti
(for Sokolov). 2. Shpolyanskaya gruppovaya laboratoriya (for
Gopak). 3. Smelyanskiy sakharnyy zavod (for Sokolova).
(Sugar manufacture)

SOKOLOVA, Ye.A.

Chemistry in agriculture. Zemledelie 7 no.10:93-96 0 '59.
(MIRA 13:1)

(Agricultural chemistry)

SOKOLOVA, E. A. (Scientific Coworker)

"Some Data on the Epizootiology of Fowl Pseudoplague"

Trudy Vsesoyuznogo Instituta Eksperimental'noy Veterinarii, Vol 13, No 1, Moscow, 1952

RATNER, L.S.; GRIBANOV, V.N.; SOKOLOVA, Ye.A.; BOBYR', A.Ya.

Results of testing VIEV vaccine against foot-and-mouth disease
made from virus adapted in rabbits. Veterinariia 32 no.1:18-20
Ja '55. (MLRA 8:2)

1.Vsesoyuznyy institut eksperimental'noy veterinarii.
(FOOT-AND-MOUTH DISEASE--PREVENTIVE INOCULATION)

SOKOLOVA, Ye.A., zasluzhennaya uchitel'nitsa shkoly RSFSR.

Independent work of students during the classes of human anatomy
and physiology. Biol. v shkole no.6:37-40 N-D '57. (MIRA 10:12)

1. Shkola No.204, Moskva.
(Anatomy, Human--Study and teaching)
(Physiology--Study and teaching)

SOKOLOVA, YE. A.

Botany - Study and Teaching

Lessons on the subject of the stem, movement and storage of substances in the plant.
Est. v shkole, No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, ~~December~~ 1952 Uncl.

BOGLOVA, Ye. A.

"Effect of Intervariety Cross-Pollination on the Length of Flowering of Buckwheat and Its Yield." Cand Biol Sci, Moscow Agricultural Acad ineni K.A. Timiryazov, Moscow, 1954. (RZhBiol, No 8, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SC: Sum. No. 556, 24 Jun 55

TEPLOV, S.I., kandidat meditsinskikh nauk (Leningrad); SOKOLOVA, Ye.A.
(Leningrad)

Effects of the cerebral cortex on the cardiovascular system connected
with imminent surgery. Klin.med. 34 no.9:41-47 S '56. (MLRA 9:11)

1. Iz terapevticheskogo sektora (zav. deystvitel'nyy chlen AMN SSSR
prof. M.V.Chernorutskiy) Instituta fiziologii im. I.P.Pavlova AN SSSR
(dir. akad. K.M.Bykov) i Gospiyal'noy khirurgicheskoy kliniki (dir.
prof. F.G.Uglov) i Leningradskogo meditsinskogo instituta imeni I.P.
Pavlova (dir. A.I.Ivanov)

(SURGERY, OPERATIVE, psychol.

eff. of cerebral cortex activity on cardiovasc. system)

(CEREBRAL CORTEX, physiol.

eff. of cortical activity on cardiovasc. system before
imminent surg.)

(CARDIOVASCULAR SYSTEM, physiol.

eff. of cortical activity befor imminent surg.

SOKOLOVA, Ye.A.

Magnetic susceptibility of gold, silver, and copper. Trudy VNIIM
no.10:110-120 '52. (MIRA 11:6)

(Gold--Magnetic properties)
(Silver--Magnetic properties)
(Copper--Magnetic properties)

Solid solutions in the quasi-binary cross-sections of the ternary systems of diagrams of magnesium with group IV elements. K. A. Bol'shakov, Ye. S. Makarov, Ye. A. Sokolova, V. I. Fistul', V. K. Prokof'yeva.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

BIRSHTEYN, T.M.; SOKOLOVA, Ye.A.

Internal rotation in polymer chains and their physical properties.

Part 18: Main optical anisotropy of isotactic polystyrene molecules.

Vysokom. soed. 1 no.7:1086-1093 J1 '59.

(MIRA 12:11)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

(Styrene--Optical properties)

BIRSHTEYN, T.M.; PTITSYN, O.B.; SOKOLOVA, Ye.A.

Theory of polyelectrolyte solutions. Part 5: Short range
interaction of charged groups in stereoregular polyelectrolytes.
Vysokom. soed. 6 no.1:158-164 Ja'64. (MIRA 17:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

SOKOLOVA, Ye. I.

The biochemical constitution of saliva in unconditioned and conditioned reflex responses. T. P. Shesterikova and E. A. Sokolova (Sci. Research Psychoneurol. Inst. Odessa). ~~Chim. i biol. Zhur.~~ Zhur. 26, 397-404 (in Russian, 405) (1954).

Two dogs were used. Saliva was obtained from the dissected and cannulated duct of the maxillary salivary gland following nutritional stimulation of dogs with conditioned and unconditioned salivary reflexes. Detns. were made of total N, dry residue, org. and inorg. constituents of Cl and of the *n*. The development of conditioned salivary reflexes is accompanied by an increase in the salivary exudate upon strong stimulation. In cases with a well established stereotype salivary reflex reaction the values of N, Cl and of the *n* are of a lesser magnitude in the saliva obtained from the conditioned than the unconditioned dog. Quantitative N and Cl studies indicate that the greater the impact of the conditioned stimulation the greater the percentage of solid substances in the secreted saliva. B. S. Levine

SHCHERBAKOV, N.M.; SOKOLOVA, Ye.A.

Effect of light and darkness on conditioned reflex activity.
Fiziol.zhur. (Ukr.) 1 no.1:15-24 Ja-F '55. (MLBA 9:9)

1. Odes'kiy psikhonevrologichnyi institut, Laboratoriya fiziologii.
(CONDITIONED RESPONSE)
(LIGHT--PHYSIOLOGICAL EFFECT)

30KBLON, YE. A.

"Conditioned and unconditioned salivation following the injection of adrenalin into dogs." Acad Med Sci USSR. Inst of Experimental Medicine. Odessa, 1956. (Dissertations for the Degree of Candidate in Medical Science)

So: Knizhaya letopis', No. 16, 1956

SOHOLOVA, Ye.A.; BOTVINKINA, L.N.

Practice in the facies analysis of ore-bearing volcanic
sedimentary deposits as revealed by a study made in the
Dzhayrem iron-ore deposit in central Kazakhstan. Trudy
GIN no.141:68-106 '65. (MIRA 19:1)

B^c

Kinetics of thermal decomposition of sodium
hydrogen sulphide in aqueous solutions. E. A.
Sazonova and L. M. Lavrova (Ukrain. Chem. J.,
1957, 12, 187-211).—The slowness of the reaction
of conversion of NaHS into Na₂S is due to hydrolysis
of the latter. The reaction is accelerated by adding
NaHCO₃ or S₂ to an extent of their concn., but not
by starch. R. T.

ASAC 11A DETAIL LITERATURE CLASSIFICATION

SOLOLOVA, YE. A.

A. B. Davankov, V. P. Perepelkin and Ye. A. Sokolova

"Coloration of Polymerized Resins in Finely Dispersed State and the Selective Absorption of Coloring Matter by Synthetic Resins." A. B. Davankov, V. P. Perepelkin and Ye. A. Sokolova, Journal Applied Chemistry 24, 95-101, January 1951, Moscow, Chem-Tech Mendeloyev Institute, Technological Plastics Laboratory.

ABSTRACT AVAILABLE

D-50054

SOKOLOVA, E.A.

U S S R .

Casting properties of emulsion polymethyl methacrylate.
A. B. Davankov and E. A. Sokolova. *J. Appl. Chem.*
U.S.S.R. 26, 185-8 (1953) (English translation).—See C.A.
47, 11793g. H. L. H.

DAVANKOV, A.B.; SOKOLOVA, Ye.A.

Casting properties of emulsion polymethyl methacrylate. Zhur. Priklad. Khim.
26, 217-20 '53. (MLRA 6:3)
(CA 47 no.21:11798 '53)

BROUNSHTEYN, B.I.; BEZDEL', L.S.; GORENBURG, V.P.; SOKOLOVA, Ye.A.

Modeling of liquid-liquid extraction processes in pulse columns.
Trudy VNIIneftekhim no.5:148-195 '62. (MIRA 15:7)
(Extraction (Chemistry))

DIKENSHTEYN, G.Kh.; SINITSYN, F.Ye.; SOKOLOVA, Ye.A.

Geological structure and prospects for finding oil and gas
in the Western-Chu Depression. Geol. nefti i gaza 7 no.5:
23-30 My '63. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut, Moskva.

(Chu Valley—Petroleum geology)
(Sary-Su Valley—Gas, Natural—Geology)

SOV/137-57-1-1234

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 161 (USSR)

AUTHOR: Sokolova, Ye. A.

TITLE: Determination of Magnetic Susceptibility of Chemically Pure Cadmium, Antimony, Sulfur, and Some Technical Materials (Opre-deleniye magnitnoy vospriimchivosti khimicheskii chistykh kadmiya, sur'my, sery i nekotorykh tekhnicheskikh materialov)

PERIODICAL: Tr. Vses. n-i. in-ta meteorologii, 1954, Vol 24, pp 122-127

ABSTRACT: Results are adduced on the determination of specific magnetic susceptibility of chemically pure Sb, Cd, and S as well as of some technical materials that have a broad application in the instrument-making industry, such as brass, bronze, Al, Sn, Zn, Hg and the insulating materials getinaks [translit.], plexiglas, oak, fused quartz, and porcelain. The results obtained can serve as reference material in the calculation of structural units containing low-magnetic materials.

N. K.

Card 1/1

КОМИССАРОВ, Михаил Абрамович; СОКОЛОВА, Ye.A., редактор; ЗАХАРОВ, K.A.,
tekhnicheskiiy redaktor

[Atoms in the service of man] Atomy na sluzhbe cheloveka. [Gor'kii]
Gor'kovskoe knizhnoe izd-vo, 1956. 105 p. (MLRA 10:9)
(Atomic power) (Radioactivity)

SOKOLOVA, Ye.A.

Method for checking the IMI-magnetic induction meter. Izv.tekh.
no.2:67-70 Mr-Ap '56. (MIRA 9:7)
(Magnetic induction--Measurement)

YANOVSKIY, B.M.; SOKOLOVA, Ye.A.

Interference devices for measuring the magnetostriction of ferromagnetic substances. Izv.tekh.no.5:20-22 S-0 '56. (MLRA 10:2)
(Magnetostriction--Measurement)
(Ferroelectric substances)

SOKOLOVA, Ye. A.

112-3-6143

Translation from: Referativnyy Zhurnal, Elektrotehnika, 1957,
Nr 3, p. 157 (USSR)

AUTHORS: Shramkov, Ye. G., Sokolova, Ye. A.

TITLE: Reference Installation for Comparing Measurements of
Magnetic Flux, Magnetic Field Intensity and Exploring
Coils (Obraztsovaya ustanovka dlya slicheniya mer
magnitnogo potoka napryazhennosti magnitnogo polya i
izmeritel'nykh katushek)

PERIODICAL: Tr. Vses. n.-i in-ta metrol., 1956, Nr 29 (89),
pp. 18-22

ABSTRACT: The basic circuit and construction of a stationary
measuring installation for comparing magnetic measure-
ments by the zero or ballistic method are described.
The technique of comparing measurements is explained,
and the results of comparisons are presented to show
that the error in translating the value of magnetic
units does not exceed 0.1%. On the basis of the sim-
plicity and ease of operation of the installation, it
is suggested that it be adopted widely in measurement
practice for checking magnetic measures.

G.L.G

Card 1/2

Reference Installation for Comparing Measurements (Cont.) 112-3-6143
ASSOCIATION: All-Union Scientific Research Institute for Metrology.
(Vses. n.-1 in-t metrol.)

Card 2/2

BIRSHTEYN, T.M.; PTITSYN, O.B.; SOKOLOVA, Ye.A.

Internal rotation and physical properties of polymer chains. Part
17: Conformation of polyisobutylene and polydimethylsiloxane mole-
cules in solution. Vysokom. soed. 1 no.6:852-856 Je '59.
(MIRA 12:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Siloxane) (Propene) (Chemistry, Physical and theoretical)

28(5)

AUTHORS:

SOV/115-59-4-15/27
Yanovskiy, B.M., Sokolova, Ye.A., and Gegin, V.S.

TITLE:

A Magnetostriction Measuring Device for the Temperature Range from -180 to +440°C (Ustanovka dlya izmereniya magnitostriksii v intervale temperatur ot -180 go +440°C)

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 4, pp 27-30 (USSR)

ABSTRACT:

A magnetostriction measuring device for the temperature range from -180 to +440°C was developed and built in the Magnitnaya laboratoriya VNIIM (Laboratory of Magnetism VNIIM). A photograph of this device is shown in figure 1. It consists of a magnetometrical and a magnetostriction part. The magnetometrical part is used for measuring the magnetization J of a specimen and consists of an astatic magnetometer and two magnetizing coils. The astatic magnetometer system is composed of two cylindrical permanent magnets, made of "magniko" alloy. The magnetometer is calibrated in units of the field intensity or in units of the magnetic moment. The error is

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SOV/115-59-4-15/27

A Magnetostriction Measuring Device for the Temperature Range
from -180 to +44°C

$\pm 1\%$ at magnetometer deflections of 300 mm. The magnetostriction part is used for measuring the magnetostriction of the specimen at the given magnetization J . It consists of an interferometer PIU-1 or PIU-2 with a quartz tube for holding the specimen. For increasing the magnetostriction measuring range, the "Fabri-Pero" standard was applied for the first time to an interferometer, whereby the accuracy of the latter was maintained. A thermostat and a cryostat provide the required temperature control. The author presents four graphs and two tables for explaining measuring results with this device. There are 1 photograph, 4 graphs, 2 tables and 1 Soviet reference.

Card 2/2

VITKOVSKIY V.F.; SOKOLOVA, Ye.A.

Electronic EG-1 type gauss meter utilizing the Hall effect. Trudy
inst.Kom.stand., mer i izm.prib. no.72:94-100 '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni
Mendeleeva.

(Magnetometer)

KISELEVA, N.T.; PALETSKAYA, I.N.; SOKOLOVA, Ye.A.

Microflora of meadow-steppe soils in the middle reaches
of the Amu Darya River. Trudy inst. bot. AN Turk. SSR 436-96
158. (MIRA 17:8)

Disertation: "Geologic structure of Devonian and Lower Coal deposits of the South western part of Central Kazakhstan and Regularities of Distribution of Iron-Manganese beds in Them." Cand Geol-Min Sci, Inst of Geological Sciences, Acad Sci USSR, 2 Jun 54. Vechernyaya Moskva, Moscow, 21 May 54.

SO: SOU 2/4, 20 Nov 1954

PADVE, E.M.; SOKOLOVA, YE.A.

New data on the stratigraphy of upper Devonian and lower Carboniferous deposits of the Dzhail'minskaya syncline in the Atasuyevskiy region of central Kazakhstan. Izv.AN SSSR. Ser.geol. 21 no.7:98-102 J1 '56.
(MIRA 9:10)

1. Geologicheskii institut Akademii nauk SSSR, Moskva.
(Atasuyevskiy region—Geology, Stratigraphic)

11-58-5-3/16

AUTHOR: Sokolova, Ye. A.

TITLE: Conditions of the Forming of Upper-Devonian and Lower Carboniferous Deposits Associated with Ferromanganesian Gres in the Dzhal'-minskaya Syncline. (Ob usloviyakh formirovaniya otlozheniy verkhnego devona i nizhnego karbona i svyazannykh s nimi Zhelezo-margantsevykh rud v Dzhal'-minskoy mul'de). The Atasu Region of Central Kazakhstan (Atasuyskiy rayon Tsentral'nogo Kazakhstana).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, Nr 5, pp 23-39 (USSR)

ABSTRACT: In the composition of the Upper-Devonian and Lower-Carboniferous deposits, the author distinguished three genetic types of deposits in the Dzhal'-minskaya syncline. The first type is spread over the whole western part of the syncline and is formed by massive homogenous limestones containing the fauna of the Famennian stage. The thickness of the strata varies between 400 and 500 m. Deposits of the second type are developed in the eastern part of the syncline: the limestones are interstratified with variously grained sandstones with admixtures of fragmental material. Deposits of the third type are distributed locally. The most characteristic

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11-58-5-3/16

Conditions of the Forming of Upper-Devonian and Lower Carboniferous Deposits Associated With Ferromanganesian Ores in the Dzhal'minskaya Syncline. (The Atasu Region of Central Kazakhstan).

columnar section is observed in the region of the Karedzhel'skoye ferro-manganese deposit. The Famennian stage is formed by fine or micrograined rocks of silico-argillo-carbonate composition often enriched by finely dispersed organic material. In the upper part of the section appear the seams of siliceous jasper-like rocks, effusive rocks and their tuffs, as well as the layers of various ferro-manganesian ores. The silico-argillo-carbonate rocks underlying these ores are of different structure. Apart from the usual varieties, there are rocks with broken stratification and rocks of lump-like structure. These structural features were presumably caused by the diagenetic redistribution of the material in the deposits. In the deposits underlying the ore-bearing deposits were found seams of fine-grained rocks of silico-argillo-carbonate composition containing numerous concretions of diagenetic nature. The whole underlying stratum, formed of fine-grained rocks and with the absence of additional fragmental materials, indicates that

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11-58-5-3/16

Conditions of the Forming of Upper-Devonian and Lower Carboniferous Deposits Associated With Ferromanganesian Ores in the Dzhal'minskaya Syncline. (The Atasu Region of Central Kazakhstan).

this stratum was formed by the sediments in relatively deep parts of the basin. The author arrives at the conclusion, that these three groups were formed under different conditions. The first group was formed in Famennian and Lower-Tournaisian stages when a shallow open sea basin existed. The second group was formed in the sectors near the coastal line of the basin. The accumulation of fine-grained sediments of the third group occurred under vastly different conditions in the deep parts of the basin. The accumulation of sediments was accompanied by volcanic submarine activity very often of a fumarolic character, which introduced the silicates, and from which the siliceous rocks were formed in the Famennian and Tournaisian time. The initial sedimentary genesis of the ferro-manganesian ore of the Atasu region having been proved by the studies of A.G. Betekhtin, G.S. Momdzhii, I.V. Dyugayev and S.I. Chaykin, the author supports the theory that the most probable source of manganese, iron and silicates was the influx into the basin of volcanic, possibly hydro-thermic

Card 3/4

11-58-5-3/16

Conditions of the Forming of Upper-Devonian and Lower Carboniferous Deposits Associated With Ferromanganesian Ores in the Dzhal'minskaya Syncline. (The Atasu Region of Central Kazakhstan).

or fumarole deposits. The epoch of ore-formation coincided with the period of the revival of the volcanic activity in Central Kazakhstan. The paragenesis of these ores with the volcanogenous and siliceous rocks also connects them with volcanic activity. The close interconnection of the volcanogenous and siliceous rocks was conditioned by under-water volcanic activity. At the same time, the ferro-manganesian ores are, as a rule, associated with the siliceous rocks, which were developed exclusively in the ore-bearing regions. Finally, numerous explorations showed that the concentrations of iron and manganese of Central Kazakhstan timed to the deposits of Famennian and Tournaisian stages are restricted to the peripheric zone of the main volcanic region of that epoch.

There are 1 map, 7 photos, 2 tables and 14 Soviet references. Geologicheskii Institut AN SSSR, Moscow (Geologic Institute of the AS USSR, Moscow)

ASSOCIATION:

SUBMITTED:

AVAILABLE:

Card 4/4

13 March 1957

Library of Congress

1. Geophysical prospecting 2. Geology 3. Ores-Deposits

SOKOLOVA, Ye.A. -

Distribution of manganese and phosphorus in different rock types
of the Uss series (lower Cambrian of the Kuznetsk Ala-Tau). Dokl.
AN SSSR 135 no.3.727-729 N '60. (MIRA 13:12)

1. Geologicheskii institut Akademii nauk SSSR. Predstavleno akad.
N.M. Strakhov.

(Kuznetsk Ala-Tau - Manganese)
(Kuznetsk Ala-Tau - Phosphates)

SOKOLOVA, Ye.A.

A type of pyroclastic rocks of Cambrian volcanic sedimentary formations
in the Kuznetsk Ala-Tau. Izv.AN SSSR.Ser.geol. 27 no.3:45-54 Mr '61.
(MIRA 15:2)

1. Geologicheskii institut AN SSSR, Moskva.
(Kuznetsk Ala-Tau—Rocks, Sedimentary)

SOKOLOVA, Ye.A.

Formation characteristics and genesis of the Takhtakaracha
manganese deposit (Zeravshan Range). Lit. i pol. iskop.
no.3:64-80 '63. (MIRA 17:1)

1. Geologicheskii institut AN SSSR, Moskva.

SOKOLOVA, Ye.A.

Some diagenetic textures in manganese-bearing layers. Geol.rud.-
mestorozh. 5 no.1:65-74 Ja-F '63. (MIRA 16:3)

1. Geologicheskii institut AN SSSR, Moskva.
(Manganese ores)

ДОКЛОВА, Ye.A.

Manganese-bearing volcanic sedimentary formations of the Californian
type. Trudy GIN no. 61:209-230 '63. (MIRA 17:9)

SOKOLOVA, Yu.A.

Carbonate-manganese ores of the Takhta-Karacha deposit (Zeravshan Range). Lit. i pol. iskop. no.4:110-113 J1-Ag '64. (MIRA 17:11)

1. Geologicheskiiy institut AN SSSR, Moskva.

SOKOLOVA, Ye.B.; ANICHKOV, N.N., akademik.

Innervation of pulmonary alveoli. Dokl. AN SSSR 93 no.1:155-157 N '53.
(MLRA 6:10)

1. Akademiya nauk SSSR (for Anichkov). meditsinskiy institut (for Sokolova).
2. Molotovskiy gosudarstvennyy (Nerve) (Lungs)

SOKOLOVA, Ye.B.

Receptors of pulmonary alveolae. Dokl. AN SSSR 111 no.3:
699-702 N '56. (MLRA 10:2)

1. Molotovskiy gosudarstvennyy meditsinskiy institut.
Predstavleno akademikom L.A. Orbeli.
(LUNGS--INNERVATION)

SOKOLOVA, Ya.B., kandidat arkitektury, starshiy nauchnyy sotrudnik; KOVEL'-
MAN, I.A., kandidat tekhnicheskikh nauk, nauchnyy redaktor;
TYAPKIN, B.G., redaktor izdatel'stva; MEL'NICHENKO, F.P., tekhnicheskii redaktor.

[New face materials for facades] Novye fasadnye oblitsovochnyye izdeliia. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekt., 1956. 22 p. (Ratsionalizatorskie i izobretatel'skie predlozheniia v stroitel'stve, no. 133). (MLRA 10:8)

(Ceramic materials) (Facades)

SOKOLOVA, Ye. B.

Housing construction in the United States. Opyt stroi.no.4:93-127
'56. (MLRA 10:2)

(United States--Apartment houses)

(United States--Architecture, Domestic)

SOKOLOVA, Ye.B., kandidat arkhitektury.

Equipment for kitchen and bathroom units of apartments. Biul.stroi.
tekh. 13 no.5:39-44 My '56. (MLRA 9:8)

1. Tsentral'nyy institut informatsii po stroitel'stvu.
(Kitchens) (Plumbing--Equipment and supplies)

SOKOLOVA, Ye.B., kandidat arkhitektury.

Industrial precast foundations. Biul. stroi. tekhn. 13 no.6:
41-46 J. '56. (MLBA 9:9)

1. Tsentral'nyy institut informatsii po stroitel'stvu.
(Foundations)

1. Sokolova, Ye.B.
SOKOLOVA, Ye.B., kand. arkhitektury.

Construction of new cities abroad. Biul. stroi. tech. 14:30-34 Ag
'57. (MIRA 10:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'stva
Akademii stroitel'stva i arkhitektury SSSR.
(City planning)

SOKOLOVA, Ye.B., kand.arkhitektury

Large public halls. Opyt stroi. no.14:186-231 '58. (MIRA 11:10)
(Stadiums) (Theaters) (Public buildings)

SOKOLOVA, Ye.B.

Institute of Urban Construction and District Planning .
Izv. ASiA no.1:116-117 '61. (MIRA 14:7)

1. Ispolnyayushchaya obyazannosti rukovoditelya sektora
informatsii Instituta gradostroitel'stva Akademii stroitel'stva
i arkhitekury SSSR.

(City planning)

SHKVARIKOV, V., otv. red.; SOKOLOVA, Ye., red.; GROSSMAN, V., red.;
MOROZOVA, G.V., red. izd-va; MOCHALINA, Z.S., tekhn. red.

[Regional planning and city planning abroad] Opyt raionnoi planirovki i gradostroitel'stva za rubezhom; sbornik. Moskva, Gosstroizdat, 1962. 159 p. (MIRA 15:12)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut gradostroitel'stva i raionnoy planirovki.
(Regional planning) (City planning)

SOKOLOVA, Ye.B.

The Institute of City Planning. Izv. ASiA 4 no.4:133-134 '62.
(MIRA 16:1)

1. Rukovoditel' sektora nauchnoy informatsii Instituta
gradostroitel'stva Akademii stroitel'stva i arkh.tektury SSSR.
(City planning)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

22

CA

Cracking stock. E. P. Korovatzki and E. B. Sukolova. *Neftyanoe Khozyaistvo* 26, No. 2, 44-51(1934).—In the Jenkins cracking unit at Grozny, various stocks were tried. Best results were obtained with gas oil from the Badger still. Bottoms and cracked gas oils form too much coke. The gasoline yield under the most favorable conditions could be raised to about 33%. The stocks as well as the final products of cracking are described. A. A. Rohtlinak

COMMON ELEMENTS

COMMON VARIANTS INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS

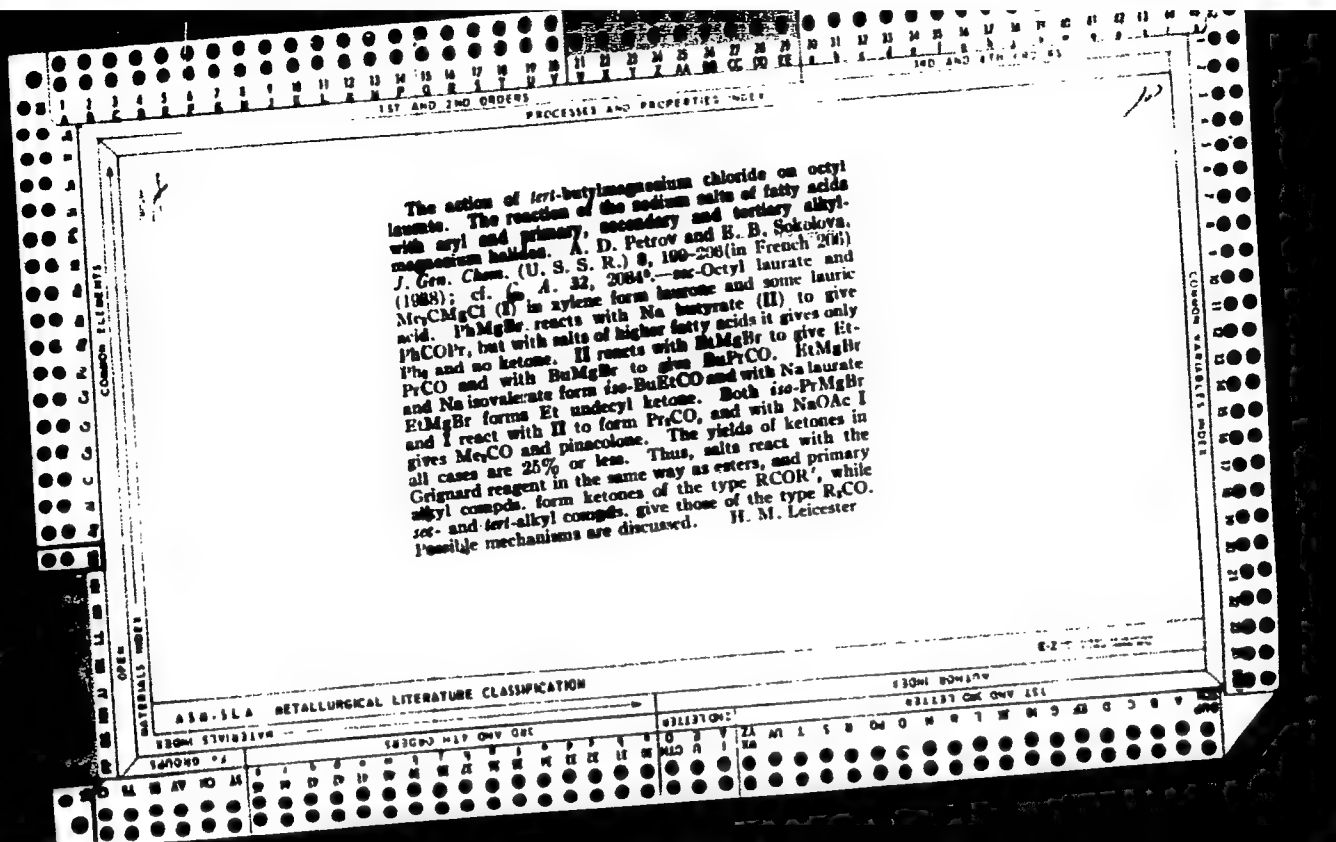
21

ca

Sulfur E. A. Sokolova and D. V. Bezuglov Russ. 44,510, Oct 7, 1935. Ammoniacal liquor from the coke oven treated with CaO gives a sludge contg. CaS and CaCO₃. This sludge is treated with flue gases to convert CaS into Ca(SH)₂, which is filtered off and mixed with a soln. of Na₂SO₄ contg. free acid to liberate the S

ASD S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS		PROCESSING AND PROPERTIES NOTES		COMMON ELEMENTS	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		<p><i>ca</i></p> <p>Dynamics of the thermal dissociation of sodium hydrogen sulfide. E. A. Sokolova and L. M. Litvinova. <i>Ukrain. Khim. Zhur.</i> 12, 107-210 (in German 211) (1937).</p> <p>Solids of NaHS were refluxed for 3 hrs., samples were withdrawn every hr., and the amts. of Na-S and NaHS were detd. iodometrically. The addn. of 0.1-0.2 g. starch unaltered NaHS decompn. by 1.5%, 0.21 and 0.46 g. $MgCl_2$ by 3.1 and 7.2%, resp., but 0.2 g. $Be(NO_3)_2$, 1 g. $Al_2(SO_4)_3$, and 2 g. Na citrate did not affect decompn. Addn. of Na_2CO_3 did not affect decompn. of NaHS. Some expts. were made with 4.8, 3.5, 2.5, 1.2, 1.05, 0.69, 0.303 and 0.285 mols. of $NaHCO_3$ per mol. of NaHS. On increasing NaHS concn. and reducing the concn. of $NaHCO_3$, the decompn. of NaHS falls, but that of $NaHCO_3$ rises. When the ratio is 2.5, the percentage decompn. of both is nearly the same. Addn. of S speeded up the decompn. of NaHS. $NaHCO_3$ was also decompd. separately. Under the same conditions, the decompn. speed of $NaHCO_3$ is 3.3 times greater than that of NaHS.</p> <p>B. Z. Kamich</p>		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	
OPEN MATERIALS INDEX		ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION		COMMON ELEMENTS	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	



CP

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PROCESSES AND PROPERTIES FILE

The products of cold-flame oxidation of motor fuel S. K. A. D. Petrov, E. B. Sokolova and M. S. Fedotov. *J. Applied Chem.* (U. S. S. R.) 12, 660-17 (in French, 617) (1959). — The main fraction (heavy aq. layer) contained acids (as AcOH) 4.82-5.39 (mostly HCO₂H and AcOH), aldehydes (as HCHO) 11.0-0.68 (AcH, HCHO, CH₃CHO, CH₃CHO), alcs. (as MeOH) 10.7 (MeOH and EtOH), ketones 2.5 (Me₂CO), esters 3.0, and MeCH₂(OMe), 3.0%. Other fractions (light hydrocarbon layer, wash water, etc.) were analyzed only for acids (0.83-5.34%) and aldehydes (3.0-7.64%). Cold-flame oxidation was accompanied by a considerable cracking of the long-chain hydrocarbons (0-7 C atoms). The cold-flame oxidation proceeded through the formation of peroxides of gaseous products of hydrocarbon cracking, which, in turn, decompl. according to the Wieland scheme: peroxides → aldehyde + alcs. (these products were found in the greatest amts.). A. A. Polgorny

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

62

SOKOLOVA, Ye.B.

Reaction of isopropylmagnesium bromide with ethyl formate and isovaleryl chloride. Zhur. Obshchey Khim. 22, 1941-3 '52. (MLRA 5:12)
(CA 47 no.18:9259 '53)

1. D.I.Mendeleev Chem. Technol. Inst., Moscow.

Sokolova, E. B.

5

Reducing action of secondary alkylmagnesium halides on esters and acyl chlorides. E. B. Sokolova (D. I. Mendeleev Chem.-Technol. Inst. Moscow), *Dokl. Akad. Nauk SSSR*, 23, 2002-6 (1953); cf. Whitmore and Lewis, *C.A.* 37, 1378.
—Reaction of 85 g. Et isovalerate with iso-PrMgBr (from 256 g. iso-PrBr) gave 40% unreacted ester, 8.2 g. $\text{Me}_2\text{CH}-\text{COCH}_2\text{CHMe}_2$ (b. 144-6°, d_{20}^{25} 0.8303, n_D^{20} 1.4083; semi-carbazone, m. 142°), and 7.7 g. $\text{Me}_2\text{CHCH}(\text{OH})\text{CH}_2\text{CHMe}_2$ (b. 154-7°, d_{20}^{25} 0.8100, n_D^{20} 1.4221; phenylurethan, m. 56-7°). Along with these products there was also obtained 14% $\text{Me}_2\text{CHCH}_2\text{COCH}(\text{CHMe}_2)\text{CO}_2\text{Et}$, b. 112-13°, d_{20}^{25} 0.9284, n_D^{20} 1.4322, identified by analysis and by products of acidic and alk. hydrolysis. Reaction of iso-PrMgBr (from 150 g. iso-PrBr) with 50 g. $\text{MeEt}_2\text{CCOCl}$ (b. 153-4°, n_D^{20} 1.4368, d_{20}^{25} 0.9955) yielded 25% $\text{MeEt}_2\text{CCH}_2\text{OH}$, b. 86-90°, n_D^{20} 1.4328, and 26% 2,4-dimethyl-4-ethyl-3-hexanol, b. 109.5-11.0°, n_D^{20} 1.4463, d_{20}^{25} 0.8621. The former was oxidized to the aldehyde for identification, while the latter alc. yielded naphthylurethan, m. 60°, and acetate, b. 205°, n_D^{20} 1.4330, d_{20}^{25} 0.8753. Reaction of 45 g. Me_2CCOCl with 3-pentylmagnesium bromide (from 148 g. RBr) gave 7.05 g. $\text{Me}_2\text{CCH}_2\text{OH}$, b. 112-14°, and 11.8 g. of mixture products, b. 91-6°. The latter was treated with alc. KOH to saponify the ester component (32.5% of the wt. of the fraction) leaving behind 3,4-diethylhexane, b. 157-8°, n_D^{20} 1.4188, formed by coupling of the alkyl radicals. G. M. K.

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SOKOLOVA, E. B.

✓ Reaction of mesitylmagnesium bromide with allyl esters of trimethylacetic and formic acids. E. B. Sokolova and M. E. Dolgaya (D. I. Mendeleev Chem. Technol. Inst., Moscow). *Zhur. Obshchei Khim.* 26, 534-7 (1956); cf. Arnold, *et al.*, *C.A.* 43, 9051d. — Reaction of 100 g. mesityl bromide with 12 g. Mg, followed by heating 16 hrs. with 72 g. $\text{Me}_3\text{CCO}_2\text{CH}_2\text{CH}=\text{CH}_2$, and treatment with aq. NH_4Cl : HCl gave 10 g. $\text{Me}_3\text{CCO}_2\text{H}$, abov. 20 g. *allylmesitylene*, b_p 87-8°, d_4^{25} 0.9085, n_D^{25} 1.5149, and some hydroxymesitylene, m. 67-8°. The use of *isobutyl trimethylacetate* (70 g.; b_p 156-8°, d_4^{25} 0.8750, n_D^{25} 1.4172, from the alc. and acyl chloride in pyridine) in a similar reaction gave 35% $\text{Me}_3\text{CCO}_2\text{H}$ and 26 g. $\text{C}_{11}\text{H}_{14}$, b_p 102-4°, d_4^{25} 0.9009, n_D^{25} 1.5123. Mesitylmagnesium bromide (from 100 g. bromide) with 60 g. Me_3CCOCl after 12 hrs. on a steam bath gave 40 g. product, b_p 125-6°, d_4^{25} 0.9623, n_D^{25} 1.5040, $\text{C}_{16}\text{H}_{20}\text{O}$, which failed to yield a semicarbazone; reduction with Na-EtOH gave an alc., $\text{C}_{16}\text{H}_{20}\text{O}$, b_p 145-7°, d_4^{25} 0.9781, n_D^{25} 1.5137, which solidified on standing and m. 35-6° (*Bs deriv.*, m. 81-2°). These indicate that the above ketone was *tert-butyl mesityl ketone*. Mesitylmagnesium bromide (from 40 g. bromide) with 18 g. $\text{CH}_3\text{CH}(\text{CH}_3)\text{O}_2\text{CH}$ gave dimesitylmethane, m. 124°, and a polymeric substance.

Chem 2 700

G. M. Kosolapoff

Sokolova, E. B.

Distr: 4E4j/4E3d/4E2c(j)

Reaction of *tert*-butyllithium with esters. A. D. Petrov, E. B. Sokolova, and Gao Chin-Lan (D. I. Mendeleev Chem. Technol. Inst., Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1957, 871-3. — A soln. of Me_3CCl in 1 vol. Et_2O added to shaved Li in Et_2O at -35° under N, the mixt. stirred 0.5 hr., the resulting Me_3CLi soln. treated with the desired ester in Et_2O (2 moles Li deriv./mole ester), the cooling bath removed, and the mixt. stirred 1 hr., then treated with ice and dil. HCl yielded a crude product which was taken up in Et_2O and then saponified with 15% alc. NaOH . Under these conditions esters readily yield tertiary alcs. and glycols. Thus were obtained: $(\text{Me}_2\text{C})_2\text{CHOH}$, 85.3%, b_p 110°, m. 51°; $(\text{Me}_2\text{C})_2\text{CP}(\text{OH})$, 66.7%, b_p 101°, n_D^{20} 1.4542, d_4^{20} 0.8052; 89.1% $(\text{Me}_2\text{C})_2\text{C}(\text{OH})\text{CHMe}_2$, b_p 78°, 1.4655, 0.8853; $(\text{Me}_2\text{C})_2\text{C}(\text{OH})\text{C}_2\text{H}_5$, 50.5%, b_p 128°, 1.4569, 0.8603; $(\text{Me}_2\text{C})_2\text{C}(\text{OH})(\text{CH}_2)_2\text{CH}_3$, 24.6%, b_p 165°, 1.4676, 0.8698; $(\text{Me}_2\text{C})_2\text{C}(\text{OH})(\text{CH}_2)_3\text{C}(\text{OH})(\text{CMe}_2)_2$, 26.3%, b_p 181°, m. 104-5°. G. M. Kosolapov

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AUTHORS: Sokolova, Ye. B., Krasnova, G. V., SOV/156-58-2-32/48
Zhuravleva, T. A.

TITLE: The Synthesis of Mono-Alkyl-Cyclohexanes of a $C_{15} - C_{18}$ Composition With an Increased Density (Sintez monoalkiltsiklogeksanov sostava $C_{15}-C_{18}$ s povyshennoy plotnost'yu)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 2, pp. 330 - 334 (USSR)

ABSTRACT: A hydrocarbon fuel with a maximum calorific power per unit volume and with good combustion characteristics can be obtained only by a rational component selection of components, taking into account the composition and the structure. The paraffin- and naphthene hydrocarbons the densities of which are increased owing to the branched structure, are most interesting in this connection. Among the first the isomers with quadrivalent carbon atoms are most interesting. The increase of the number of lateral chains and the more compact position of the chains in the polysubstituted cyclohexane homologues or the presence of a carbon atom in the lateral chain of the monosubstituted alkyl-cyclohexanes lead to a

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considerable density even at a constant molecular weight. It was the purpose of this paper to produce a number of monosubstituted cyclohexane homologues the carbon structure of which contains 1 or 2 carbon atoms; furthermore the evaluation of the influence of a branched structure on the density. After presenting a detailed experimental part the authors draw the following final conclusions : 1) 4 new mono-alkyl-substituted benzene homologues were synthesized and characterized according to their main physical and chemical properties; from these 4 new mono-alkyl-substituted cyclohexane homologues were produced by catalytic hydration, containing 1 or 2 carbon atoms in the lateral chain. 5 new tertiary alcohols were produced for the first time as intermediates in the synthesis. The mentioned final products are the following: 2,4-dimethyl-1-4-cyclohexyl octane, 2,6-dimethyl-4-propyl-4-cyclohexyl heptane, 2,2,4,6-tetramethyl-4-cyclohexyl heptane, and 2,2,5-trimethyl-3-cyclohexyl hexane. The density of these cyclanes amounts to from 0,8392 to 0,8450. This surpasses considerably the density

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of the mono-alkyl-substituted homologues of the cyclohexane of the same composition with a normal or only to a small extent branched lateral chain. The density increase in consequence of the structure ramification amounts to approximately 3% for the synthesized hydrocarbons. The increase of the calorific value per unit volume connected with it is of considerable practical interest. There are 1 figure and 6 references, 2 of which are Soviet.

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5(3)

AUTHORS:

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SOV/74-27-12-3/4

TITLE:

Organolithium Synthesis of Hydrocarbons and Their Oxygen-
Containing Derivatives (Litiyorganicheskiy sintez
uglevodorodov i ikh kislorodsoderzhashchikh proizvodnykh)

PERIODICAL:

Uspekhi khimii, 1958, Vol 27, Nr 12, pp 1471 - 1503 (USSR)

ABSTRACT:

The last comprehensive survey of papers dealing with the topic mentioned in the title was published in 1949. The authors were Kocheshkova and Talalayeva (Ref 1). Since then a number of interesting investigations were carried out which are the subject of the present paper. The investigations of the synthesis of dehydro benzene (cyclohexadiene) and of a number of hydrocarbons based on it carried out by Wittig (Vittig) are most interesting. This is the reason why the mentioned investigations as well as a number of other papers by Wittig are given preference in the discussion. It was Wittig (Refs 56, 57) who discovered in 1942 for the first time that dehydro benzene can be formed from o-Li-fluoro benzene where fluorine develops a particular mobility. During the last 15 years the following reactions were carried out with the mentioned hydro

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carbon and its homologs: 1) 1,4-dihydro naphthalene endoxide 1-4 was obtained by means of condensation with furan. A pyrazolene derivative which was decomposed into pyrazoles and 3-4-benzofuran polymer in the presence of copper powder was obtained by condensation with diazo methane. 2) Endomethylene dihydro naphthalene was obtained by condensation with cyclopentadiene. With cyclohexadiene, dehydro benzene yielded an adduct which was decomposed into naphthalene and ethylene on heating. 3) On condensing with N-methyl pyrrole, endomethyl iminodihydro naphthalene was formed. 4) Interesting transformations of dilithium derivatives of aromatic hydrocarbons were observed to occur under the action of cobalt (II)-chloride (Ref 4). 5) By the action of phenyl lithium on 1- and 2-fluoro naphthalenes and subsequent carbonization from both compounds 1-phenyl-2-naphthoic acid and 2-phenyl-1-naphthoic acid were obtained and 2-phenyl-3-naphthoic acid from 2-fluoro naphthalene. 6) Dehydro benzene is able to condense with anthracene and in not more than one stage forms triptcene. 7) Wittig and his collaborators used triphenyl carbinolate for the investigation of the regrouping of benz-

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